ATTORNEY-CLIENT COMMUNICATION//ENFORCEMENT SENSITIVE/DO NOT RELEASE UNDER FOIA

REGION 6 STATUS UPDATE

TOPIC: Continuous Air Monitoring around Denka Performance Elastomer (Denka), Neoprene Manufacturing Facility, LaPlace, Louisiana

DATE: December 2, 2020

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PURPOSE/ACTION NEEDED: Continuous Air Monitoring Update

BACKGROUND:

On December 19, 2019 EPA sent a letter to then-Parish President Robottom, to provide an update regarding EPA's plans to change the air monitoring program in 2020. In that letter, we stated our intention to implement a new air monitoring program to better understand the frequency and magnitude of chloroprene spikes and stated that we believe that this air monitoring effort may help us identify actions that Denka may be able to take to reduce the occurrence of spikes and thereby further reduce ambient concentrations of chloroprene in the community. In implementing the new program, our existing air monitoring stations were replaced with new monitors, referred to as "SPods"[1], at each of EPA's six existing community monitoring sites. Each SPod contains a meteorological station to continuously measure wind speeds and directions and a photoionization detector (PID) to continuously measure total volatile organic compound (VOC) concentrations in the air. Each SPod includes a sampling system that is automatically triggered to collect a 24-hour canister sample whenever the PID registers a spike in VOC. Samples are sent to the laboratory for chloroprene analyses. The new monitoring program was designed to show the highest concentrations of chloroprene in the community and less likely to show low or undetectable levels of chloroprene[2].

On January 6, 2020 Congressman Richmond sent a letter to Regional Administrator McQueen, requesting a community meeting be convened to explain the new air quality monitoring program. EPA responded to Congressman Richmond informing him of a planned meeting with the local community to discuss the details of EPA's new air monitoring program. On January 29, 2020, Congressman Richmond responded to EPA's plans for a community meeting with 5 questions, at a minimum, that he believed should be answered at EPA's community meeting. Those questions were:

- What level of chloroprene will trigger a "spike" under the new system?
- Is this method continuous in time and geography?
- What will happen to the old system?
- How long will this new system be in place and how can the community be sure it will reveal

1 Later referred to as "continuous air monitors"
2 Included as a reference to what was shared in our letter to the Parish President.

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honest data?

- Will the new method allow the community to be informed of the risk to which they are being exposed?

CURRENT STATUS:

During the week of March 9-13, 2020, EPA deployed a new air monitoring program around the Denka Facility. During that deployment, EPA met with community members, including St. John the Baptist Parish Council members, residents of the community, an attorney representing some community members (Hugh "Skip" Lambert), and a member of the Louisiana Environmental Action Network (Wilma Subra). The continuous air monitors, located at the Fifth Ward Elementary School, East St John High School, Chad Baker Street, Ochsner Hospital, Acorn/Hwy 44, and the Levee, continuously measure ambient VOC concentrations. Any exceedance of the monitor's set VOC levels triggers the collection of a 24-hour air sample via summa canister and a subsequent lab analysis of that sample. On July 23, a firmware update that allows the Continuous Air Monitors to set a dynamic threshold trigger was installed at all SPod locations. The trigger is set at some level above the raw PID data after a baseline removal algorithm has been applied. To set the trigger level, EPA evaluates a small percentage of the previous month's total PID data and sets the level at a multiple of the median value of that data set. The methodology has been refined over time to generally lower the dynamic trigger levels and can potentially change from month to month based on the variability of the previous month's PID data. As of November 10, 2020, EPA evaluated the highest 25% of the previous month's total PID data and set the trigger level at twice that median value. Using that method, the trigger levels are currently set at 94 ppb at Fifth Ward Elementary School, 100 ppb at East St John High School, 61 ppb Chad Baker Street, 53 ppb at Ochsner Hospital, 116 ppb at Acorn/Hwy 44, and 69 ppb at the Levee.

Using a dynamic trigger, 33 air samples have been triggered and analyzed. Of the 33 analyzed results, the highest chloroprene concentration was 15.182 $\mu g/m^3$ at the Fifth Ward Elementary School location on October 17, 2020. Chloroprene results from the Continuous Air Monitoring Program were added to EPA's public website on September 11, 2020.

Starting on October 1, 2020, EPA began conducting instrumentation quality checks by manually triggering an air sample from any continuous air monitor that has not sampled within seven days[3]. Fifteen canisters have been manually triggered and analyzed since October 1, 2020, with the highest manually triggered result being 10.700 $\mu g/m^3$ at the Levee location on October 3, 2020.

As stated in our publicly available QAPP, in addition to the commencement of the Continuous Air Monitoring project, EPA will seek additional detailed operational and maintenance information from Denka to assist assessment. Although we have not engaged Denka to date regarding additional information related to our Continuous Air Monitoring Program, we do plan to request additional information that will help with the assessment of the Continuous Air Monitoring result on October 17, 2020, at a minimum. There are additional elevated Continuous Air Monitoring results that are less than

3 There may be times when an instrument is offline due to maintenance or troubleshooting which could delay the triggering of an SPod. For example, when an SPod sensor is being replaced, there may be more than 7 days without a sample at that location.

15 µg/m^3, 6.130 µg/m^3 and 10.700 µg/m^3 (manually triggered on October 3), 8.107 µg/m^3 (manually triggered on October 21), and 9.081 µg/m^3 (dynamically triggered on October 27) for which the case team may also request additional information. EPA plans to initially request that Denka provide additional information voluntarily.

On September 26, 2020, EPA discontinued its community air monitoring program in LaPlace, Louisiana.

Summary of Continuous Air Monitoring Data Collected Through the End of October 2020 (Operational Phase[4] data is very limited and will skew averages).

- 90 total samples collected.
- 88 total samples have been analyzed, 5 of which were replicate samples. The average chloroprene concentration of the 88 samples is 0.962 µg/m^3. Initial Phase overall average chloroprene concentrations was 0.398 µg/m^3 and Operational Phase overall average chloroprene concentrations is 2.343 µg/m.[3]
- 13 total Non-Detects (ND). 7 ND during the Initial Phase, 6 ND during the Operational Phase: 2 ND using the Dynamic Trigger, and 4 ND using a manual trigger.
- 2 total Invalid Samples.
- 15 total samples at Chad Baker with an overall average chloroprene concentration of 2.263 µg/m^3. During the Initial Phase 7 samples with an average chloroprene concentration of 0.434 µg/m^3 and during the Operational Phase 8 samples with an average chloroprene concentration of 3.864 µg/m^3.
- 10 total samples at Fifth Ward Elementary School with an overall average chloroprene concentration of 3.352 µg/m^3. During the Initial Phase 7 samples with an average chloroprene concentration of 0.339 µg/m^3 and during the Operational Phase 3 samples (1 replicate not used in average) with an average chloroprene concentration of 7.983 µg/m^3.
- 17 total samples at East St. John the Baptist High School with an overall average chloroprene concentration of 0.160 µg/m^3. During the Initial Phase 13 samples with an average chloroprene concentration of 0.132 µg/m^3 and during the Operational Phase 4 samples with an average chloroprene concentration of 0.369 µg/m^3.
- 15 total samples at Ochsner Hospital with an overall average chloroprene concentration of 0.461 µg/m^3. During the Initial Phase 9 samples with an average chloroprene concentration of 0.694 µg/m^3 and during the Operational Phase 6 samples with an average chloroprene concentration of 0.159 µg/m^3.
- 21 total samples at Acorn/Hwy 44 with an overall average chloroprene concentration of 0.343 µg/m^3. During the Initial Phase 12 samples with an average chloroprene concentration of 0.387 µg/m^3 and during the Operational Phase 9 samples with an average chloroprene concentration of 0.468 µg/m^3.

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4 EPA's posting of data was initiated by the project transitioning from the Initial Phase to the Operational Phase. From the March deployment until the end of August, the project was in the Initial Phase. The initial phase included the assessment of a static trigger, the replacement of valves on each SPod Canister System, and the implementation and testing of the dynamic trigger firmware update. The Operational Phase began in September and data was posted to our website on September 11, 2020 to include all data from the Initial Phase and is updated to include Operational Phase data as it becomes available.

- 10 total samples at Levee with an overall average chloroprene concentration of 0.343 µg/m^3. During the Initial Phase 7 samples with an average chloroprene concentration of 0.534 µg/m^3 and during the Operational Phase 3 samples with an average chloroprene concentration of 3.792 µg/m^3.

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NEXT STEPS/ACTION ITEMS:

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